## REMARKS

As for the status of the present application, Claims 7 and 9-12 have been amended, and Claims 1-20 are pending in this application. Reconsideration of this application is respectfully requested. A Petition and fee for a three month extension of time is enclosed.

Claims 1-20 were rejected under 35 U.S.C. § 102(e) as being anticipated by US Patent No. 6, 407, 761 issued to Ching et al.

The present invention provides for methods and apparatus that select or exclude and identify the manner of selecting and excluding complex sets of objects contained in a set of such objects. A input data memory stores a mapping from objects in a set of objects from which a complex set is to be selected to a set of nodes organized in a tree-like structure that represents a hierarchical ordering of such objects. The input data memory stores an identification of each node independent of its position in the hierarchy, and identifies each node in relation to other nodes in the hierarchy. This identification is achieved by storing references to a parent node, one or more sibling nodes and one or more child nodes, along with an indication of whether the representation constitutes a full or partial partition of the represented set. The input data memory also stores a status state of the selection or exclusion of each node and a related system of graphical icons to represent the status state of selection or exclusion of the node. The processing system and software are operative to change the status state of nodes in a tree-like graphical presentation of the nodes, store the results in the data memory, and change the graphical icon representation of such states based on an input event from the user.

The software evaluates a current state of selection or exclusion of a node that is subject to an event, and, based on such state, retains or changes the state in a designated sequence based upon receipt of the input event, and updates a display of the graphical icon representing the state resulting from such processing that corresponds to the node. The software recursively evaluates the current state of selection or exclusion of each child node, if any, of the node that is subject to the event, and, based on the state of selection, retains or changes the state in a designated sequence based upon the result of the processing of the node subject to the input event and updates the display of the graphical icon representing the state resulting from such processing that corresponds to the child node.

The software recursively evaluates the current state of selection or exclusion of each parent node, if any, of the node subject to the event, and determines whether all child nodes of the parent constitute a complete partition of the object represented by the parent node, and based on the results, retains or changes the status state of the icon in a designated sequence and updating the display of the graphical icon representing the state resulting from such processing that corresponds to the parent node. The output data device updates the status state of selection of each node effected by the input event by operation of the process and stores the change in data memory, which changes the icon graphically representing the status of selection or exclusion of each node so affected.

The Ching et al. patent in the Field of the Invention section states that it "relates to the field of object-oriented business process development and specifically discloses a system for visually customizing interfaces for business objects to achieve interoperability between disparate computer systems." The Summary of the Invention section of the Ching et al. patent states that the disclosed system and method "provides a hardware environment enabling a developer to customize the interface to the business object. A smart code generator or a runtime environment is required to support this invention in order to generate the resulting code of the customized methods which comprise the interface. During development of an application program which needs to access the business objects, the user customizes the interfaces of the business objects such that the application program has the necessary and proper access to the business objects. A graphical user interface is provided which displays all of the business objects available to the system in a menu-driven format. The user selects the business object whose interface needs to be customized. Upon this selection, a comprehensive list of methods which are available to the business object is displayed. The user then selects the particular method which needs to be used by the application program under development. Upon selection of the method, a comprehensive list of parameters which are available to that business object are then displayed. The user then selects the parameters which are needed for the application program to interface with the business object. The end goal is to allow the user to select only the methods and parameters which he intends to use in the application program."

With regard to Claim 1, the Examiner has recited the elements therein and has identified portions of the Ching et al. patent that purportedly disclose them. However, it is respectfully submitted that the specifically claimed structure is not disclosed by the passages cited by the Examiner. It is respectfully submitted that the Examiner has extended the teachings of the Ching et al. patent beyond its express scope using hindsight reconstruction in order to reject the present invention. The Examiner has generally stated that the various claimed aspects of the present invention are disclosed in the cited passages of the Ching et al. patent, but a detailed reading of the passages reveals that the specific detailed aspects of the present invention are clearly not disclosed by the Ching et al. patent.

The Examiner stated that column 2, lines 51-59 of the Ching et al. patent discloses "apparatus for selecting or excluding and identifying the manner of selecting and excluding complex sets of objects contained in a set of such objects" and that Fig. 10 illustrates this in a tree-like graphical form. Column 2, lines 51-59 states "A graphical user interface is provided which displays all of the business objects available to the system in a menu-driven format. The user selects the business object whose interface needs to be customized. Upon this selection, a comprehensive list of methods which are available to the business object is displayed. The user then selects the particular method which needs to be used by the application program under development. Upon selection of the method, a comprehensive list of parameters which are available to that business object are then displayed."

While column 2, lines 51-59 and Fig. 10 appears to describe a graphical user interface wherein items are displayed for selection, there is no disclosure or suggestion in this cited portion of the Ching et al. patent, or any other part thereof, that the graphical user interface provides a mechanism for "identifying the manner of selecting and excluding complex sets of objects contained in a set of such objects." The present specification states on page 6, that "In order to facilitate the process of selection, the present invention provides a process for designating how nodes are selected or excluded by assigning to each node an **attribute list**. This attribute list designates certain aspects of a node's current state and manner of selection." and "In the preferred implementation of the present invention, a series of graphic icons are associated with each node to designate the node status. FIG. 3 illustrates these status icons. This set of icons is a preferred aspect of the present invention. For convenience of reference in the discussion that follows, a number is used to designate each status, although other designations may be employed if sufficient to constitute a unique reference."

Thus, while the graphical user interface shown in Fig. 10 of the Ching et al. patent may provide a means for selecting or excluding business objects, it is abundantly clear that the Ching et al. patent does not disclose or suggest anything regarding "identifying the manner of selecting and excluding complex sets of objects contained in a set of such objects" as this is envisioned by the present invention. The Ching et al. graphical user interface provides check boxes along with various text edit boxes 1014, 1018 that allow a user to input text values, and a box 1020 that allows the user to enter a directory 1020 in which a configuration file is stored. Thus, it is respectfully submitted that none of the selection boxes contained in the Ching et al. graphical user interface provides for apparatus for "identifying the manner of selecting and excluding complex sets of objects contained in a set of such objects" as is presently claimed.

Claim 1 calls for "an input data memory for storing an identification of each node independent of its order, and for identifying each node in relation to other nodes in the hierarchy by storing references, if any, to a parent node, one or more sibling nodes and one or more child nodes, along with an indication of whether the representation constitutes a full or partial partition of the set that is represented, and for storing a status state of the selection or exclusion of each node to represent the status state of selection or exclusion of the node."

The examiner cited column 4, lines 40-49 the Ching et al. patent as disclosing the input data memory for storing a mapping from objects in a set of objects from which a complex set is to be selected to a set of nodes organized in a tree-like structure that represents an ordering of the objects. While the Ching et al. patent appears to disclose a graphical user interface apparently having nodes organized in a tree-like structure, it is respectfully submitted that the fully-claimed structure recited in Claim 1 is not present. This is abundantly clear, since the Examiner did not cite any reference for the balance of the above-quoted claim element. It is respectfully submitted that any assertion by the Examiner that the Ching et al. patent discloses this aspect of the present invention is mere conjecture and amounts to hindsight reconstruction.

It is respectfully submitted that the Ching et al. patent does not disclose or suggest anything regarding apparatus for "storing references, if any, to a parent node, one or more sibling nodes and one or more child nodes, along with an indication of whether the representation constitutes a full or partial partition of the set that is represented, and for storing a status state of the selection or exclusion of each node to represent the status state of selection or exclusion of the node." However, the Examiner cited column 6, lines 30-50 of the Ching et al. patent as disclosing a parent node, one or more sibling nodes and one or more child nodes, along with an indication of whether the representation constitutes a full or partial partition of the set that is represented.

Column 6, lines 30-50 states that "FIG. 9 is a flowchart depicting the overall operation of the invention. First, the hierarchical data structure is extracted 902 from the metadata which can be done by searching through the metadata for the appropriate information. It is then mapped 904 to the graphical icons. The graphical icons are generated by a graphic generator which creates the image on a visual display, through which the graphical icons are provided to the user. Then, the user selects 906 the graphical icon of the particular method which he wants to customize. All the graphical icons representing the parameters which are available to that method icon are then displayed 908. The user then selects 910 the graphical icon of the particular parameter which he wants to customize. Likewise, all the graphical icons representing the fields which are available to that parameter are then displayed 912. The user then selects 914 the graphical icon of the particular field for which a value is to be defined and inputs 916 the value for that field. Depending on whether the customization is complete 918, the user can then begin the process again until all customization of the various methods has been completed, at which point, a configuration is saved 918 to file."

It is respectfully submitted that the Examiner has extended the express teachings of the Ching et al. patent in order to reject the present invention, and has attributed certain aspects of the present invention to the Ching et al. teaching without having any specific recitation of the claimed aspects. For example, a detailed review of the Ching et al. patent reveals that it does not recite the terms "partition" or anything regarding storing an indication of whether the representation constitutes a full or partial partition of the set, or storing a status state of the selection or exclusion of each node to represent the status state of selection or exclusion of the node. It is again respectfully submitted that any assertion by the Examiner that the Ching et al. patent discloses these aspects of the present invention is mere conjecture and amounts to hindsight reconstruction.

An important aspect of the present invention is that it allows a user to see the manner of selection and exclusion of complex sets without expanding the tree. The Ching et al. software requires a user to expand the tree to make selections, but does not disclose the manner of selection or exclusion. The present invention need not be represented in a tree structure, although this is a "preferred embodiment" and is the easiest to understand.

As is recited in our Claim 1, the present invention includes "an input memory data for storing identification of each node independent of its order, and for identifying each node in relation to other nodes in the hierarchy by storing references, if any, to a parent node, one or more sibling nodes and one or more child nodes, along with an indication of whether the representation constitutes a full or partial partition of the set that is represented, and for storing the status state of the selection or exclusion of the node."

There is nothing disclosed or suggested in the Ching et al. patent regarding any of this. Nothing is disclosed or suggested in the Ching et al. patent that identifies the status of selection or exclusion of a node as part of a set -- it only discloses a means of selecting a node. The Ching et al. patent does not disclose at all whether nodes are excluded as opposed to merely not selected. The Ching et al. patent does not disclose any way in which the manner of representing the selection discloses the relation of the selection or exclusion to other nodes in the tree. The Ching et al. patent requires a person to expand the entire tree to view the status of each node. Thus, one cannot tell from viewing a parent node whether child nodes are selected without expanding the tree, whereas our invention discloses selections below a parent node without the necessity of expanding the tree.

It is respectfully submitted that the Ching et al. software uses a graphical tree structure to pick elements of a set that are then included in an object program. The graphical tree interface only shows the status of a selection at a node and requires exposing each node to determine whether it is selected or not. The present invention shows the status of selection and exclusion of nodes in the entire set as represented by the tree. The present invention also identifies at each node its status of selected, excluded, or partially selected or excluded, which the Ching et al. patent does not. The Ching et al. patent focuses on selecting at each node. The present invention is about demonstrating the results of selecting for the entire set.

In view of the above, it is respectfully submitted that the Ching et al. patent does not disclose or suggest the invention recited in Claim 1, and certainly not without the use of hindsight reconstruction. Accordingly, withdrawal of the Examiner's rejection and allowance of Claim 1 are respectfully requested.

With specific regard to dependent Claims 9 and 11, it is respectfully submitted that the Ching et al. patent discloses nothing whatsoever regarding recursive evaluation as is performed in accordance with these Claims. The terms "recursive" and "recursive evaluation" are not used in the Ching et al. patent. It is respectfully submitted that any assertion to the contrary by the Examiner is mere conjecture and amounts to hindsight reconstruction.

Dependent Claims 2-12 are considered patentable based upon the allowability of Claim 1 from which they depend. Therefore, it is respectfully submitted that the invention recited in Claims 2-12 are not disclosed or suggested by the Ching et al. patent. Withdrawal of the Examiner's rejection and allowance of Claims 2-12 are respectfully requested.

Independent method Claim 13 contains limitations that generally correspond to the apparatus limitations recited in Claim 1. Accordingly, it is respectfully submitted that the Ching

et al. patent does not disclose or suggest the invention recited in Claim 13 for the reasons argued with regard to Claim 1. Furthermore, it is respectfully submitted that the Ching et al. patent does not disclose or suggest the invention recited in Claim 13 without using hindsight reconstruction. Accordingly, withdrawal of the Examiner's rejection and allowance of Claim 13 are respectfully requested.

Dependent Claims 19 and 20 contain limitations that generally correspond to the apparatus limitations recited in Claims 9 and 11. It is respectfully submitted that the Ching et al. patent discloses nothing whatsoever regarding recursive evaluation as is performed in accordance with Claims 9 and 11. The terms "recursive" and "recursive evaluation" are not used in the Ching et al. patent. It is respectfully submitted that any assertion to the contrary by the Examiner is mere conjecture and amounts to hindsight reconstruction.

Dependent Claims 14-20 are considered patentable based upon the allowability of Claim 13 from which they depend. Therefore, it is respectfully submitted that the invention recited in Claims 14-20 are not disclosed or suggested by the Ching et al. patent. Withdrawal of the Examiner's rejection and allowance of Claims 14-20 are respectfully requested.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure to the extent indicated by the Examiner.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Reconsideration and such allowance are earnestly solicited.

Respectfully submitted,

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